	Application No.	Applicant(s)
Notice of Allowability	09/518,328	BURNS, JOHN J
	Examiner	Art Unit
	Dwin M Craig	2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to <u>3-4-2005</u>.

2. ☒ The allowed claim(s) is/are <u>1-11,13-15, 21-23 and 25</u>.

3. ☒ The drawings filed on <u>4/30/2004</u> are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some*   c)☐ None of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a)☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1)☐ hereto or 2)☐ to Paper No./Mail Date _____ .

    (b)☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
    Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

W Tuome
Primary Examiner
TC 2100
AU 2123

DETAILED ACTION

And

NOTICE OF ALLOWANCE

1.   **Claims 1-11, 13-15, 21-23 and 25** are Allowed.

2.   **Claims 12, 16-20 and 24** are cancelled.

3.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee. See Rule 1.126

     3.1   The application has been amended as follows:

Claim 14, line 1, please change "**claim 13**" to -- **claim 12** --.

Claim 15, line 1, please change "**claim 14**" to -- **claim 13** --.

Claim 22, line 1, please change "**claim 21**" to -- **claim 15** --.

Claim 23, line 1, please change "**claim 22**" to -- **claim 16** --.

Authorization for the following examiner's amendment was given in a telephone

interview with John Rooney, Registration Number 28,898 on 6-7-2005.

     3.2   **Claims 16-20** are cancelled.

     3.3   The specification is amended as follows:

Page 4, line 15, please change "**field as**" to -- **field 208 as** --.

<u>*Examiner's Reasons for Allowance*</u>

4.   The following is an examiner's statement of reasons for allowance: The following

limitations in combination with other limitations are neither anticipated nor made obvious by the

prior art. As regards independent **Claims 1, 4, 6, 8, 11, 13, 21 and 25** *"a plurality of emulation*

objects", in combination with, *"each of said plurality of target processors having a plurality of*

specialized communications instructions." The Examiner notes that emulation of a target

processor, having a different software architecture, from the software architecture where the

emulation is taking place is well known in the art, however, the combination of having that

emulated processor having *special communications instructions,* is neither disclosed or made

obvious by the prior art. The Examiner notes that in Applicant's specification on page 4 is

disclosed, *"In accordance with the preferred mode of the present invention, a Pentium*

microprocessor chip, available from Intel Corporation, is used as the host for emulating the

Distributed Communications Processor (DCP), available from Unisys Corporation. The

invention uses a fast index to the target instruction code used by the processor object. An array

of procedures is defined in the application in the header file. Each array is defined as a pointer.

The pointer is initially void. The real values are filled in by the constructor of the processor

object during initialization of the processor. Using this array, the processor flow is directed to

the single instruction using op code and an additional four bit field as a direct index to the

routine.

When a target instruction is processed by the processor object, it is immediately

dispatched using the op code index into an array of target instruction pointers. This is an

efficient alternative to running a string of comparisons between op codes and target

instructions." The Examiner notes that when the Applicant is claiming, *special communications*

instructions, that this phrase can only be reasonably interpreted to mean an op-code instruction

that is used on a communications processor, like a Unisys *Distributed Communications*

Processor (DCP), as disclosed and defined on page 4 of Applicant's specification. The

emulation of a processor that uses these *"special instructions",* as defined in Applicant's

specification, are neither anticipated nor made obvious by the prior art.

4.2   Dependent **Claims 2, 3, 5, 7, 9, 10, 14, 15, 22 and 23** are allowed as they depend

from allowed base claims.

4.3   Any comments considered necessary by applicant must be submitted no later than

the payment of the issue fee and, to avoid processing delays, should preferably accompany the

issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

The Examiner has included in the Office Action numerous prior art references that

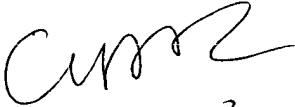disclose the state of the art in regards to processor emulation.

5.1   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dwin M Craig whose telephone number is (571) 272-3710. The

examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Leo P Picard can be reached on (571) 272-3749. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC